

ABSTRACT OF THE DISCLOSURE

A technique for establishing automatic service connectivity in a network between multiple network elements is disclosed. Each network element utilizes routing and distribution protocols to discover its neighbors and establish a topology. Optical fibers connect the network elements. Each optical fiber carries multiple wavelengths of signals, wherein the network elements communicate with a server. The method comprises: storing information pertaining to each of ~~said~~^{the} network elements at the server; registering network elements by collecting information about each network element; receiving a connectivity request from a first registered node for connection with a second registered node; determining compatibility of the first and second registered node; and instructing network elements upon verifying compatibility to search for an end-to-end wavelength path and establish a connection between the first registered node and the second registered node.